

UCRSF 2.1
10/13/06



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

October 13, 2006

Reply to
Attn of: ECL-112

Marko Adzic
Manager, Environmental Engineering
Teck Cominco American, Inc.
501 North Riverpoint Boulevard
Spokane, WA 99220

Re: Upper Columbia River Site - RI/FS Priorities

Dear Mr. Adzic:

The U. S. Environmental Protection Agency, as supported by the Department of the Interior, the Confederated Tribes of the Colville Reservation, the Spokane Tribe and the Washington State Department of Ecology (Participating Parties) have been working together on EPA's UCR RI/FS for several years. Now that Teck Cominco is taking over the RI/FS and preparing the Work Plan for future work, EPA wants to take this opportunity to inform Teck Cominco's planning process for the RI/FS by articulating priorities for the next steps.

As you know, there is a significant list of potential studies we agreed to in the Scope of Work under the settlement agreement. It is valuable to start thinking now about how to prioritize and schedule these studies. We appreciate that Teck Cominco wishes to be responsive to public concerns and understand that Teck Cominco's recent statements concerning their intent to sample water and beaches stems from that concern. However, EPA wants to ensure that priorities and tasks are set according to the normal RI/FS planning process.

Problem Formulation and Project Planning during Scoping (see the Statement of Work for Remedial Investigation and Feasibility Studies Upper Columbia River Site) are the times most appropriate to begin setting priorities. During Scoping, EPA encourages dialogue on the factors important to setting priorities. This letter conveys our recent thinking on priorities: some factors for



setting priorities, and study priorities which EPA would like to see scoped, developed, and implemented early in the investigation.

This prioritization is based on the following factors:

1. Data gaps in the information developed in EPA's Phase 1 RI,
2. Activities which require long planning times, or multiple years to perform (making them critical path investigations),
3. Information needs of major importance for Human Health and Eco Risk evaluations.
4. Metrics provided in the documents Principles for Managing Contaminated Sediment Risks at Hazardous Waste Sites (OSWER Directive 9285.6-08) and Contaminated Sediment Remediation Guidance for Hazardous Waste Sites (EPA 2005)

Based on these factors, the following assemblage of the current important issues for EPA was developed. They fall into the categories of source information, bioavailability, fate and transport, and opportunistic samples. As the RI/FS progresses and more data are obtained, additional priority activities may arise.

Source Information Data Gap

An evaluation and presentation of the chronological solid and liquid-phase discharges from the Trail facility must be conducted to ensure that the list of contaminants of concern is complete and potential magnitude of contaminants is understood. These need to be compared to toxicological data to determine whether additional chemicals need to be added to the analyte list prior to additional analyses being conducted.

Bioavailability

The bioavailability, bioaccumulation, and toxicity of contaminants in the Upper Columbia River are of particular concern. The determination of the bioavailability of the sediments, surface water, pore waters; and soils will be an important problem formulation component. Raising and lowering of the reservoir may impact pore water, surface water and sediment concentrations thru flushing, changing contaminant mobility and/or chemistry. A confounding factor may be the effects of large scale bank sloughing which may positively or negatively impact contaminant concentrations. Thus, the locations, rates of erosion, and redistribution patterns of unconsolidated deposits entering the river must be accounted for in site characterization. All of these interactions need to be translated into the conceptual site model.

A refined sediment conceptual model is a key to determining any additional studies and toxicity tests necessary to understand the relationship between toxicity, exposure, and metals concentrations. Similarly, understanding contaminant bioavailability in surface water may benefit from early consideration. In addition it is important to understand in the conceptual model, which species (aquatic and terrestrial) are likely to be exposed and through which pathways.

Surface Water Sampling

To understand water quality in the system, the water column and major tributaries to the Columbia River need to be spatially and synoptically sampled over a number of events. Because this may take a number of years, it needs to be considered early in the investigation process.

Fate and Transport

Contaminant transport is only partially understood. The movement of slag and non-slag related contaminants has an impact on many of the decisions needed for the RI/FS.

As there may be numeric fate and transport modeling required, planning needs to begin early in the RI/FS to ensure that models are investigated and data needs are taken into account as investigations are planned.

Toxicity Tests

As this is a complex system, current toxicity tests results do not show a clear dose response curve. A refined sediment toxicity conceptual model and additional toxicity studies are needed before considering what additional studies and tests may be required to understand the relationship between toxicity, exposure, and contaminant concentrations.

Fishery personnel have confirmed that the larval and fry stages of the sturgeon are missing from the sturgeon population. Sturgeons are currently spawning in the Upper Columbia, but the juvenile fish are not surviving. The cause of the missing next generation is of paramount concern to all parties. Determining whether there is a toxicity component to mortality is therefore a priority.

Species Assessments: fish, wildlife and benthic

Assessments are needed to determine what benthic organisms and aquatic and terrestrial species are present and potentially exposed to site contaminants.

Plant Consumption: Eco and human health risk assessment

Plant use and potential contaminant concentrations for both terrestrial and aquatic plants will be an important input to the human health and eco risk assessment.

Opportunistic samples

Teck Cominco has mentioned that one of their priorities is to sample additional beaches. Because of budget constraints, EPA's investigation did not include a study of the variation in concentration across beach areas. This study should be done concurrently with additional beach sampling efforts.

Please be advised that our purpose is to provide you with our input to the planning process. Teck Cominco should also add their own metrics for determining study priorities. We look forward to discussing how to prioritize the upcoming studies, including our initial priority studies and how they will be addressed in the Work Plan and future sampling events as the planning process for this site progresses over the next few months.

If you have any questions, please do not hesitate to contact either Sally Thomas or me.

Sincerely,

Signed 10/13/06

Kevin Rochlin
Project Manager

cc: EPA Site Management Team
EPA Technical Team
Participating Parties